

Studying the effectiveness of electronic banking training and advertising costs on attracting bank deposits

Abstract:

The general purpose of the current research was to study the effectiveness of electronic banking education and advertising costs on the attraction of bank deposits in Saderat Bank of Mazandaran. This research was applied in terms of purpose and descriptive in terms of survey type. Its statistical population consists of all the branches of Saderat Bank of Mazandaran province, numbering 111 branches, based on the table of Karjesi and Morgan (1970), 92 branches were selected as a sample by stratified random sampling method. To collect data, the financial statements of Saderat Bank of Mazandaran province in the years 2014-2015 were used. To analyze the data, univariate and multivariate regression tests were used. the results showed that; The costs of e-banking education and advertising have a positive and significant effect on the attraction of bank deposits in Saderat Bank of Mazandara province. The results of the regression test also showed that advertising cost with beta coefficient $\beta = 0.612$ has the greatest effect on the attraction of bank deposits.

Key words: education cost, advertising cost, electronic banking, attracting bank deposits

Introduction

Significant advances in the field of information and communication technology in recent decades have transformed all aspects of human life, and today we are talking about new concepts such as e-government, e-commerce, e-banking, e-insurance and e-education. What has so far been affected by this technology more than others is the field of trade and commerce, and in the meantime, the banking industry has also experienced a significant transformation (Jodzadeh et al., 2013). In general, electronic banking means the provision of all banking services, including the transfer of resources through a public and accessible computer network. One of the dimensions of the developments of the new century is the profound changes that have occurred in the economic relations between individuals,

companies and governments. In the meantime, commercial exchanges have rapidly moved out of their traditional state, which was mainly based on the exchange of paper documents, and towards conducting exchanges through the use of electronic information-based systems, and as a result, electronic commerce has increased in speed., efficiency, productivity and reduction of business costs have opened a new field in business processes (Qasemi, 2017). According to the estimates made, out of the seven thousand billion dollars worth of global exports of goods and services, five hundred billion dollars are spent on the preparation and exchange of relevant documents. In other words, about 7% of the value of global exchanges is the cost of preparing and exchanging commercial documents. With the electronicization of these exchanges, the cost of preparing and exchanging documents will be greatly reduced. Estimates show that different countries of the world have been able to save a lot in their various business activities by using electronic commerce instead of traditional paper-based methods. In the meantime, in order to maintain the market for its export products in the world market, Iran is trying to set up an electronic commerce system and create suitable platforms to implement its achievements in the country. One of the most important economic bases required for e-commerce to be possible is the existence of an electronic funds transfer system, so that in this system, after ordering goods or services between the seller and the customer, it is possible to transfer money between the customer's account and the seller's account electronically. Gared (Hyderpur and Tahmasabi Getabi, 1388).

Advertising and information in business has become an integral part of economic units today; In such a way that the survival and continuity of any business depends to a large extent on the success or failure of the information, marketing and advertising activities of that unit's products. Advertising means planning and the concept of planning means to introduce what material at what time, with which media and in what way to the audience in order to get the maximum impact (Sanaei et al., 2015). The studies that have been conducted on not only the attraction but also the retention and loyalty of customers show the effect of advertising on the attraction and loyalty of customers (Yoano et al., 2014). Today, in our country, due to the increase in the number of banks and the provision of almost similar services, banks have faced a big problem in attracting customers and, as a result, their deposits. Therefore, in this competitive environment, in order to maintain or increase their share of the market, banks must have a proper plan to present their advertisements (Rabiei et al., 2019).

On the other hand, nowadays, organizations cannot survive without transformation, and the necessity of transformation in organizational departments, including human resources, structures, technology,

etc., is not hidden from anyone. In order to create these stable, logical and constructive changes, the organization must be transformed into a transformational organization. A transformative organization learns to change over time and its functions are transformed. Such an organization improves its functions through awareness and better understanding (Nazimi et al., 2018).

Given that in Iran's banking system, advertising costs are one of the heaviest marketing costs of banks, and a major part of television, radio, print and billboard advertising is allocated to banks and financial institutions. Therefore, there is a question in the minds of the managers and supervisors of banking affairs, whether this volume of advertising has had positive benefits on the commercial performance of banks or not? Therefore, according to the presented materials, the main question of the current research is: "Does the cost of e-banking education and advertising have an effect on the attraction of bank deposits in Saderat Bank of Mazandaran?".

Research background

The most important researches carried out in the country and abroad regarding the subject of the research are as follows:

Yaqoubi et al. (2014), in a research entitled "Network Analysis of Vital Factors Affecting Customer Deposits" which they conducted on 18 branch managers of the National Bank of Sistan and Baluchistan Province, reached the following results: service factors (electronic services, service quality and variety of services), communication and human factors (advertisements and how employees deal with customers), financial factors (deposit interest and the amount of payment facilities) and physical factors and conditions (location of branches and interior and exterior design branches) are effective in attracting customer deposits; Nakhai et al. (2013), in a research entitled "Identification and prioritization of factors affecting customer attraction in Qarz Al-Hasneh Mehr Bank of Iran, Khorasan

Razavi Province" showed that providing banking services with The minimum fee rate, as the first important factor, the continuous strengthening of technological facilities in the bank, as the second important factor, the management of the funds attracted in the bank, as the third important factor, the physical factors and the internal environment of the bank, as the fourth factor. Management of continuous communication with customers, as the fifth important factor, geographical location and environmental facilities of the bank, as the sixth important factor, and extensive advertising, as the seventh important factor, are effective in attracting customers; Lotfi-Bidhandi and Khalil-Khani (2012) in They showed a research entitled "Investigation of the effect of the effective factors of modern banking systems on the attraction of resources in commercial banks (Bank Mellat)". that there is a significant relationship between macroeconomic variables such as advertising, awards, savings in administrative costs and the amount of deposits; Hamidizadeh and Noorian (2012), in a research entitled "Explaining and evaluating the effectiveness of television advertising on attracting customers in Saderat Bank of Iran" showed that the TV ads of Saderat Bank were effective in attracting customers; Heydarpour and Tahmasabi Getabi (2008), in a research entitled "Effect of education cost and advertising cost of electronic banking on the increase in the attraction of Saderat Bank's deposits" showed that there is a significant relationship between the cost of advertising of electronic

banking and the increase in the attraction of bank deposits. It doesn't exist, but there is a significant relationship between the cost of e-banking training and the increase in deposits.

Sweetwat (2015), in a research entitled "Investigation of factors affecting the quality of banking services in Chanbari Province, Thailand" showed that; Customers considered the bank's advertising as one of the important factors in the quality of banking services; Siyani and Minyoui (2013), in a research entitled "Factors affecting the choice of a bank in the United Arab Emirates" showed that; Profit, recommendation by friends, recommendation by acquaintances, branch location, service cost, reliability, facilities provided by banks, good advice by staff, reputation of the bank and polite and kind staff are the criteria for choosing a bank by customers; Rashid et al. (2012), in a research titled "Bank Selection Criteria in Developing Countries: A Case Study Among Bangladesh University Students" showed that; Electronic banking (ATM, internet, phone bank), convenience, competence of employees, appearance (internal and external of the bank), influence of others and advertising are the most important factors or factors for choosing a bank and Abhiman and colleagues (2009), in a research With the title "Investigation of factors affecting the attraction of bank deposits" they showed that; Factors such as manpower, the level of education of employees, the bank's environment, the place of establishment and the location of the bank, advertisements,

government laws and regulations, and the reduction of government interference in banking affairs have been listed as effective factors in attracting people's deposits. And the most important and effective factor of attracting people's capital is human power.

research method

The current research is applied in terms of purpose and descriptive in terms of survey type. Its statistical population consists of all the branches of Saderat Bank in Mazandaran province, 111 branches in 5 categories (excellent B, 1st grade, 2nd grade, 3rd grade and 4th grade) based on the table of Karjesi and Morgan (1970), the number of 92 branches with sampling method Random stratified with appropriate allocation were selected as samples. In order to collect data, the financial statements of Mazandaran Bank Saderat in the years 1390-1394 were extracted by reviewing all the documents issued regarding the expenses of electronic banking training and advertising from the accounting unit of Saderat Mazandaran Bank, along with the number of employees and the number of branches. Its overhead cost has been extracted. To analyze the data in the descriptive statistics section of the frequency, frequency percentage, mean and standard deviation and in the inferential statistics section, to check the normality of the data distribution using the Kolmogorov-Smirnov test and to check the research hypotheses using the test Univariate and multivariate regressions were used. Also, data analysis was done using SPSS20 software.

Research findings

- Investigating the effectiveness of electronic banking services by year

Table 1- Effectiveness of electronic banking services by branch and year

انریختنی							کد شعبه
رتبه	کلی	94 سال	93 سال	92 سال	سال 91	90 سال	
15	0.89	0.965	0.882	0.835	0.837	0.937	80
4	1	0.979	1.181	0.895	0.989	0.938	126
9	0.95	0.908	1.061	0.88	1.016	0.9	706

10	0.94	0.962	1.016	0.873	0.887	0.942	1028
12	0.92	0.927	0.971	0.835	0.964	0.918	1051
7	0.97	1.305	0.84	0.865	0.966	0.885	1495
8	0.96	1.027	0.916	0.975	1	0.88	1713
15	0.89	0.873	0.97	0.76	0.902	0.955	1778
11	0.93	0.929	0.809	0.913	1.054	0.958	2347
2	1.04	1.017	1.016	0.836	1.052	1.263	2547
15	0.89	1.022	0.78	0.81	0.969	0.87	2553
15	0.89	1.004	0.891	0.876	0.879	0.816	2728
9	0.95	1.017	0.806	1.016	0.956	0.943	2729
7	0.97	1.042	1.053	0.819	1.025	0.919	2731
1	1.12	0.81	1.662	0.951	1.043	1.123	2734
14	0.9	0.988	0.893	0.888	0.945	0.797	3083
10	0.94	0.817	1.011	0.912	1.001	0.938	21
16	0.88	0.687	1.046	0.945	0.899	0.809	87
12	0.92	0.935	0.856	0.89	1.005	0.9	167
12	0.92	0.988	0.871	0.902	0.963	0.866	269
13	0.91	0.901	0.831	0.944	0.965	0.897	277
7	0.97	0.925	0.827	0.977	1.129	0.998	335
9	0.95	1.009	0.902	1.007	1	0.829	380
7	0.97	0.915	0.833	1.104	1.01	1.012	544
15	0.89	0.846	0.971	0.803	0.973	0.84	910
9	0.95	1.007	0.832	0.822	1.03	1.052	917
15	0.89	0.921	0.858	0.93	0.901	0.839	957
13	0.91	0.967	0.807	0.872	1.043	0.846	959
14	0.9	0.868	0.837	0.879	0.99	0.915	1505
6	0.98	0.772	0.836	1.35	1.04	0.905	2147
10	0.94	1.009	0.927	0.947	0.962	0.861	2932
7	0.97	0.859	0.881	0.985	1.019	1.09	3051
16	0.88	0.837	1.002	0.76	0.986	0.822	114
13	0.91	0.917	0.549	1.484	0.852	0.729	152
11	0.93	1.022	0.889	0.967	0.915	0.873	536
5	0.99	0.832	1.353	0.959	0.928	0.855	888
15	0.89	0.92	0.867	1.019	0.832	0.81	1052
5	0.99	0.867	1.129	1.056	0.987	0.907	1053
7	0.97	1.003	1.085	1.012	0.851	0.877	1463
11	0.93	0.82	1.027	0.843	0.999	0.945	1714

15	0.89	1.051	1.085	0.917	0.545	0.875	2158
9	0.95	0.919	1.152	0.884	0.888	0.911	2204
4	1	1.086	0.992	0.948	0.986	0.99	2701
12	0.92	0.985	0.91	0.832	1.034	0.848	2780
13	0.91	0.917	1.03	0.861	0.848	0.91	119
14	0.9	0.912	0.885	0.845	1.013	0.86	128
16	0.88	1.026	0.992	0.559	0.659	1.146	162
13	0.91	0.828	0.702	1.119	1.002	0.898	1433
7	0.97	0.97	1.021	0.928	1.095	0.846	1529
17	0.86	1.019	0.669	0.702	1.019	0.893	1582
2	1.04	1.015	0.959	0.856	1.092	1.276	2358
9	0.95	0.916	1.421	0.954	0.699	0.767	3432
10	0.94	1.023	0.852	0.959	1.031	0.814	39
6	0.98	1.024	0.982	0.963	1.024	0.882	78
7	0.97	0.841	0.819	1.204	1.061	0.912	589
8	0.96	0.982	0.897	0.932	1.012	0.986	855
9	0.95	0.974	0.925	1.044	1.004	0.824	963
6	0.98	1.051	0.913	0.937	1.002	1.001	1147
10	0.94	1.047	0.841	0.945	0.997	0.887	1437
14	0.9	0.868	0.861	0.873	1.02	0.874	1642
8	0.96	0.917	0.912	0.905	1.009	1.049	1716
9	0.95	0.851	0.734	1.104	1.02	1.021	1717
10	0.94	0.972	1.078	0.827	0.983	0.815	2031
3	1.02	1.123	0.907	1.086	1.007	0.987	2206
12	0.92	0.956	0.818	0.898	1.005	0.943	2368
3	1.02	1.049	0.93	1.123	0.999	1.007	2612
6	0.98	1.019	1.221	0.935	0.877	0.864	2695
10	0.94	1.091	0.879	0.843	0.99	0.919	2765
5	0.99	1.081	0.867	0.978	1.003	1.006	2848
8	0.96	1.052	0.917	0.992	0.983	0.864	2909
12	0.92	0.94	0.874	0.901	1.011	0.853	3049
5	0.99	1.062	0.916	0.962	1.064	0.954	3183
15	0.89	0.908	0.931	0.803	0.956	0.867	59
12	0.92	0.864	0.963	0.995	0.97	0.815	88
5	0.99	0.947	0.911	1.124	1.017	0.966	283
13	0.91	0.944	0.752	1.126	0.903	0.823	327
18	0.83	0.976	0.95	0.914	0.689	0.631	543

9	0.95	0.89	0.9	0.925	1.004	1.024	796
16	0.88	0.886	0.927	0.874	0.899	0.821	911
8	0.96	0.862	0.95	1.02	1.075	0.895	954
16	0.88	0.903	0.767	0.862	0.99	0.873	1435
11	0.93	0.94	0.672	1.059	1.003	0.984	1499
2	1.04	0.951	0.941	1.041	0.987	1.257	2008
10	0.94	0.982	1.039	0.843	0.983	0.866	2010
10	0.94	0.954	0.987	0.722	1.006	1.05	2557
11	0.93	0.927	0.95	0.838	1.013	0.937	3257
11	0.93	0.973	0.839	0.906	0.994	0.922	74
10	0.94	0.969	0.812	1.067	1.016	0.837	82
12	0.92	0.822	0.845	0.934	1.016	0.978	1146
4	1	0.881	1.291	0.836	1.066	0.937	1470
11	0.93	0.955	0.884	0.833	1.05	0.951	2033
10	0.94	1.055	0.733	1.008	1.006	0.923	2205

Table 1 shows that; Branch code 2734 with effectiveness of 1.12 ranks first and branch code 543 ranks last with effectiveness of 0.83.

- Testing the normality of data distribution

Table 2- Kolmogorov-Smirnov test results to check the normality of data distribution

متغیرهای پژوهش	میانگین	انحراف معیار	حجم نمونه	z آماره	سنجش معناداری
هزینه آموزش	88/69	777/26	92	198/1	058/0
هزینه تبلیغات	13/374	16/145		207/1	051/0
جذب سپرده بانکی	032/7818 03	118/4252 36		997/0	071/0

According to Table 2; Because at the confidence level of 95% and measurement error = 0.05, the significance level for all variables was calculated as $Sig > 0.05$, so the data follow the normal distribution and for the inferential analysis of the data, The use of parametric statistical tests is allowed.

- Examining research hypotheses

Hypothesis number one: the costs of electronic banking training have an effect on attracting bank deposits.

Table 3- The results of univariate regression test in hypothesis number one

Sig	T	β	R ²	R	Sig	F	متغير مستقل
726/ 0	352/ 0-	-	535/ 0	732/ 0	000/ 0	633/1 03	عدد ثابت
000/ 0	18/1 0	732/ 0					هزینه آموزش

according to table 3; Considering that the significance level of the F statistic, smaller than 0.05 (Sig=0.000), was calculated, it indicates the validity of the intended regression model. according to the findings of this table; Because at the 95% confidence level and error Measurement = 0.05, the significance level for the education cost variable Sig>0.05 has been calculated, so the null hypothesis is rejected and the research hypothesis is confirmed. Therefore, with 95% certainty, we can conclude that: "E-banking training costs have a positive and significant effect on attracting bank deposits". Also, the value of R² shows that about 53% of the variance of bank deposit absorption is explained by the costs of e-banking training.

Hypothesis number two: Advertising costs of electronic banking have an effect on attracting bank deposits.

Table 4- The results of univariate regression test in hypothesis number two

Sig	T	β	R ²	R	Sig	F	متغير مستقل
53/0	631/0 -	-	577/ 0	76/0	000/ 0	81/12 2	عدد ثابت
000/ 0	082/1 1	76/0					هزینه تبلیغات

According to Table 4; Considering that the significance level of the F statistic, smaller than 0.05 (Sig=0.000), was calculated, it indicates the validity of the intended regression model. according to the findings of this table; Because at the 95% confidence level and error Measurement = 0.05, the significance level for the advertisement cost variable Sig>0.05 has been calculated, so the null hypothesis is rejected and the research hypothesis is confirmed. Therefore, with 95% certainty, we can conclude that: "E-banking advertisement costs have a positive and significant effect on attracting bank deposits". Also, the value of R² shows that about 58% of the variance of bank deposit attraction is explained by the costs of electronic banking advertisements.

The main hypothesis: the costs of e-banking education and advertising have an effect on the attraction of bank deposits in Saderat Bank of Mazandaran.

Table 5- The results of the multivariate regression test in the main hypothesis

Sig	T	β	R ²	R	Sig	F	متغیرهای مستقل
911/ 0	112/ 0	-					عدد ثابت
001/ 0	471/ 3	525/ 0	628/ 0	792/ 0	000/ 0	965/7 4	هزینه آموزش
000/ 0	696/ 4	612/ 0					هزینه تبلیغات

according to table 5; Considering that the significance level of the F statistic, smaller than 0.05 (Sig=0.000), was calculated, it indicates the validity of the intended regression model. according to the findings of this table; Because at the 95% confidence level and error

Measurement=0.05, the significance level for education and advertising costs Sig>0.05 has been calculated, so the null hypothesis is rejected and the research hypothesis is confirmed. Therefore, it can be concluded with 95% confidence that: "E-banking education and advertising costs have a positive and significant effect on the attraction of bank deposits in Saderat Mazandarat Bank". Also, the value of R² shows that about 63% of the variance of bank deposit absorption is explained by the costs of e-banking education and advertising. The results of the regression test also show that: advertising cost with a beta coefficient of $\beta = 0.612$ has the greatest effect on the attraction of bank deposits.

Discussion and conclusion

In the banking industry, with the increasing number of banks and the increasing choice of customers, the role of advertising in order to succeed in this field of competition is increasingly important, and on the other hand, due to the economic problems of most banks and the increasing importance of productivity and cost efficiency. As well as the large budgets that are spent on advertising programs, it seems necessary to evaluate the effectiveness and efficiency of advertising and education. Therefore, in this research, the effectiveness of e-banking training and advertising costs on the attraction of bank deposits in Saderat Bank of Mazandaran province has been investigated.

The results of this research showed that; The costs of e-banking education and advertising have a positive and significant effect on the attraction of bank deposits in Mazandaran Saderat Bank. That is, with the increase in the education and advertising costs of electronic banking, the amount of bank deposits will also increase. Also, advertising costs have the greatest impact on attracting bank

deposits. This finding is in agreement with the results of the researches of Yaqoubi et al. (2014), Nakhai et al. 2015), Rashid et al. (2012) and Abhiman et al. (2009) are consistent. Therefore, it is suggested to the managers and officials of Saderat Bank of Mazandaran province to carry out extensive training of employees and appropriate bank advertising with scientific and coherent planning in order to increase the attraction of bank deposits.

In the end, according to the findings of the research, the following suggestions are presented:

- Bank managers and officials should teach the public how to use electronic banking by holding specialized electronic banking exhibitions.
- Special conferences and seminars should be held for privileged and special customers to teach them how to use electronic banking.
- Managers and officials of the bank should carry out targeted and educational advertisements to inform the bank's customers and also to attract them.
- The managers and officials of the bank should increase the attraction of bank deposits by conducting media advertisements and awarding prizes.

1- References

- 2- 1- Jodzadeh, Mehta; Darzian Azizi, Abdul Hadi; Nadaf, Mehdi and Bani, Shirin. (2011). Survey of customer satisfaction with electronic banking services using the EUCS model. Study: National Bank branches in Ahvaz city. The 4th International Banking Services Marketing Conference, Tehran, Financial Services Marketing Center.
- 3- 2- Hamidizadeh, Mohammad Reza and Noorian, Zabih Elah. (2012). Explaining and evaluating the effectiveness of television advertising on attracting customers (case study of Saderat Bank of Iran). Two quarterly journals of innovation and value creation, first year, number 3, pp. 33-46.
- 4- 3- Heydarpour, Farzaneh and Tahmasbi-Ghatabi, Abu Talib. (1388). The effect of training cost and advertising cost of e-banking on the increase in the attraction of bank deposits (case study of Saderat Bank of Mazandaran province). Journal of Financial Accounting and Audit Research, No. 1, pp. 43-51.
- 5- 4- Rabiei, Ali; Mohammadian, Mahmoud and Jamili brothers, Bita. (1390). Evaluating the effectiveness of Bank Parsian's advertising and identifying the most important factor in increasing its effectiveness in Tehran. Scientific Research Journal of Modern Marketing Research, No. 2, pp. 17-40.
- 6- 5- Sanyaei, Ali; Mohammad Shafiei, Majid and Amini Valashani, Maedeh. (2015). The effectiveness of bank advertising in

- attracting customers. Two scientific-research quarterly journals of commercial management explorations, 8th year, number 15, pp. 185-209.
- 7- 6- Ghasemi, Majid. (1387). Productivity management in modern banking. *Electronic Banking Monthly*, No. 8.
 - 8- 7- Lotfi Bidhandi, Bita and Khalil Khani, Rooh Elah. (2012). Investigating the effect of the effective factors of new banking systems on attracting resources in commercial banks. The first national conference on the development of monetary and banking management, Tehran, permanent secretariat of the conference on the development of monetary and banking management.
 - 9- 8- Nazimi, Shamsuddin; Mortazavi, Saeed; Convenience, tact. (1388). The role of new banking services in attracting customers and improving the efficiency of the banking system with an emphasis on the cost and time of employees (case study of Sepeh banks in Mashhad). *Journal of humanities and social sciences*, fifth year, number 19, pp. 1-26.
 - 10- 9- Nakhai, Mohsen; Hosseini, Seyyed Ibrahim and Jafari, Maryam. (2013). Identification and prioritization of factors affecting customer attraction in Qarz Al Hasaneh Mehr Bank of Iran, Khorasan Razavi Province. The first national marketing conference of opportunities and challenges
 - 11- 10- Yagoubi, Noor Mohammad; Kurd, Hamed; Muradzadeh, Abdulbasit and Dezhkam, Jassim. (2014). Network analysis of vital factors affecting the attraction of customer deposits. Two scientific-research quarterly journals of commercial management explorations, seventh year, number 13, pp. 157-133.
 - 12- Abhiman, D., & Subhash, C.R., & Ashok, N. (2009). Labor-use efficiency in Indian banking: A branch-level analysis. *Journal of Omega*, 37, 411-425.
 - 13- Ioannou, M., Boukas, N., & Skoufari, E. (2014). Examining the role of advertising on the behaviour of co-operative bank consumers. *Journal of Cooperative Organization and Management*, 2(1), 24 - 33.
 - 14- Rashid, M., Bhuiyan, A. B., & Nishat, A. (2012). Bank selection criteria in developing country: Evidence from bangladesh. *Asian journal of scientific research*, 5(2), 58-69.
 - 15- ayani, H., & Mini aoui, H. (2013). Determinants of bank selection in the united Arab Emirates. *International journal of bank marketing*, 31(3), 206-228.

- 16-Suvittawat, A. (2015). Commercial Bank Service Quality: Chonburi Province, Thailand. *International Journal of Management Sciences and Business Research*, 4(2), 2226-8235.